



Utah Department of Environmental Quality

Stericycle Fact Sheet

August 2006

Frequently Asked Questions

What is Stericycle incinerating?

Stericycle incinerates medical waste that includes such items as syringes, gowns, gloves, and masks used in medical procedures, and expired and unused pharmaceuticals.

What are the health impacts, if any?

The Department of Environmental Quality evaluates facilities based on health and technology standards. All data indicates that Stericycle is operating within federal and state health standards that include safety factors beyond levels used to protect humans. In addition, dioxin research on soils in the Wasatch Front do not show concentrations above background levels from facilities that have emitted much higher levels of dioxins. We do not believe there are any adverse health impacts.

What is an emergency bypass, how many have been reported in past years?

A bypass is when emissions from the incinerator are routed through a relief stack as a result of an upset, bypassing the waste heat boiler and some pollution control equipment. Bypasses are triggered by power outages or equipment malfunctions. Bypassing is a safety measure to prevent damage to the equipment and avoid safety hazards due to the unit overheating. When a bypass event begins, the feeding of the waste into the incinerator is cut off. Under Stericycle's operating permit, it must document bypasses, how they happened and what corrective measures were taken.

A bypass does not necessarily mean that emissions limitations are exceeded. It only means that they are not routed through all add-on control devices; emissions are still routed through the secondary combustion chamber which is inherent to the incinerator and where significant amounts of the emissions are controlled.

Stericycle had 9 bypasses last year; 19 in 2004; and 31 in 2003. Bypasses, in the last three years, have significantly decreased. Each year, the

company has improved its bypasses by about 40 percent. The duration ranges from 3 minutes to 2 hours and 30 minutes.

Estimated emissions from bypasses have been:

Pollutant	2004	2005
Particulate Matter (PM10)	231.7	140
Sulfur Dioxide	2.6	1.7
NOx	129.5	78.4
Hydrogen Chloride	Negligible or N/A	Negligible or N/A
Carbon Monoxide	6.8	4.2
VOC	3.1	1.9
Mercury	Negligible or N/A	Negligible or N/A
Lead	0.5	0.3
Cadmium	Negligible or N/A	Negligible or N/A
Dioxins	Negligible or N/A	Negligible or N/A

All values are in pounds per year unless otherwise noted.

What are Stericycle's annual emissions?

Pollutant	Air Permit Limit	2004 Actual Emissions	2005 Actual Emissions
Particulate Matter (PM10)	1.81	1.3	0.318
Sulfur Dioxide	7.71	0	.004
NOx	25.15	20.65	17.331
Hydrogen Chloride	7.97	0.227 or 454 lb/yr	0.517 or 1034 lb/yr
Carbon Monoxide	2.45	0.44	0.251
VOC	6.13	0.50	0.124
Mercury	57.8 lb/yr	14.4 lb/yr	14 lb/yr
Lead	125.2 lb/yr	5.8 lb/yr	6 lb/yr
Cadmium	16.86 lb/yr	0.3 lb/yr	0.367lb/yr
Dioxins	0.013 lb/yr	0.0006 lb/yr	0.0006 lb/yr

All values are in tons per year unless otherwise noted.

How is Stericycle permitted?

Stericycle was first issued an air quality permit in August 1990, and last revised in October 2003. The solid and hazardous waste permit was first issued in March 1991, and the latest renewal was issued in February 2006.

The air quality permit specifies the required pollution control equipment to be installed and operated at Stericycle and the maximum emission levels allowed to be emitted.

Under the Solid and Hazardous Waste permit, Stericycle can dispose of medical wastes but not industrial and hazardous waste at its facility. The facility is required to test for metals in the bottom ash that is generated during the incineration process.

How often is Stericycle inspected?

The Division of Air Quality conducts a full compliance inspection annually. Third party stack testing is performed every 3 to 5 years. Continuous monitoring is required for all critical systems that could cause emissions to exceed permitted limits. Stericycle is required to submit deviation reports, semiannual monitoring reports, and an annual compliance certification. These reports are reviewed by the Division of Air Quality. In the last 4 years, four compliance issues were identified, none were for excess emissions. The violations were for failing to submit information in a timely manner. Stericycle immediately complied.

The Division of Solid and Hazardous Waste conducts inspections on a semi-annual basis. The last inspection was on June 22, 2006. No notices of violation were ever issued for disposal issues.

What type of air monitoring is being done?

There is an air monitoring station near the refineries and gravel operations on Warm Springs Road and another one in Bountiful. These locations were selected to represent the highest predicted concentrations of air contaminants in the area. The National Ambient Air Quality Standards have not been violated at these monitors in the last 15 years.

What emission limits are in place?

The air quality permits and emission limits on Stericycle are in place to protect public health. The screening that was performed prior to issuing the

permit looked at maximum concentrations and compared those concentrations to conservative screening levels. The most recent in-stack sampling was performed in 2004. Another stack emission test is scheduled in 2007.

How are the Stericycle emissions limitations determined?

For the Stericycle permit, scientists first considered the OSHA-established exposure levels for each contaminant. These levels are based on the best science available and are designed to protect the health of a worker who is spending 8 hours a day at the plant over a normal career.

Recognizing that exposure is different for someone who lives nearby, and the health impacts vary from age, Utah rules establish a screening level which adds additional safety factors to the OSHA-exposure levels to protect the general public. The permit limits all fall below the Utah toxic screening levels. Actual emissions are significantly below the permit limits.

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